BLUETOOTH PERSONAL AREA NETWORK ROUTING PROTOCOL OPTIMIZATION USING CONNECTIVITY METRIC

ABSTRACT OF THE DISCLOSURE

A method is disclosed for routing data packets in a wireless network, preferably a Bluetooth™ network. The method includes estimating a link bandwidth of at least one network node, calculating a connectivity metric based on the estimated link bandwidth, distributing information concerning the calculated connectivity metric and, using the calculated connectivity metric, determining a route having a maximum link bandwidth and a minimum traffic load. Preferably, estimating uses a model of a Bluetooth network medium access control MAC algorithm. The connectivity metric is defined as a ratio of a maximum link bandwidth to the estimated link bandwidth, where the maximum link bandwidth is the link bandwidth between a Master node and a Slave node when there is only one Slave node connected to the Master node (i.e., when there is one Slave node in the piconet with the Master node).